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AUTHOR Byrd, David
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ABSTRACT

For the purposes of this study, a research instrument, Teacher Inservice Professional Skills Survey, was developed and used to assess the perceptions of each educational interest group: teachers, administrators, and teacher educators. The survey consisted of topics dealing with teacher skills and knowledge that led to effective instruction. Respondents were asked to react on a Likert-type scale to a number of statements concerning teacher professional skills. Responses were coded as to how great a need there is for inservice education in this skill or knowledge for practicing public school teachers. The areas of need were identified as: planning, diagnosis, instruction, classroom climate, evaluation, and classroom control. All six areas were perceived as needed in teacher inservice education by the three interest groups. A predominant pattern of the survey results was that respondent groups agreed as to which items were of most need but differed as to the magnitude of need for each item. The results point out the need for teacher inservice eduction based on systematic models of instruction that reflect perceptions of need. Similarities in perception pointed to in this study should aid the collaborative process, enabling constituency groups to work toward common goals. A discussion is given of the crucial factors in programming and governance of inservice programs. Responses of the three groups to the survey are displayed in tabular form. (JD)

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A Summary of Teachers', Administrators', and Professors' Perceptions of the Need for Teacher Inservice Education.

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David Byrd
Assistant Professor

Southern Illinois University
at Carbondale

SP 019 408

Teacher education's power structure has been disrupted. As teacher organizations have gained strength, they have displaced some of the influence of other eductional interest groups. As an outcome, collaboration has taken place. Collaboration has resulted because of political necessity, and its logic as a decision-making model.

The success of collaboration depends to some extent upon a understanding of the perceptions of those groups involved in the governance of inservice programs. If teachers feel teacher educators and administrators do not understand their inservice needs, they will not have confidence in the ability of these two groups to contribute to the planning and implementation of inservice activities. This could greatly weaken the inherent strength of a collaborative arrangement, in which each group brings its own insights to a common problem.

An accurate representation of the perceptions of these groups is a first step toward a resolution of specific differences, resulting in an enhancement of instruction. Assessment is the first step toward working together to address a common concern.

A large portion of the literature is critical of teacher inservice education as it has been practiced. Howey (1976) described it as "multifaced if not many splendored enterprize" (p. 101). He points out that teacher professional growth has not been taken seriously and has lacked a realistic methodology. These strong comments are supported, if somewhat less emphatically, by a study of the perceptions of teachers toward inservice education.

Brimm and Tollett (1974) surveyed teachers in Tennessee and

found 44% of the teachers perceived inservice education as not well planned, 31% agreed that "most inservice programs are virtually useless," and 73% that "many inservice activities do not appear relevant to any felt needs of the teachers" (p. 522). These findings and the previous comments of Howey and Rubin do not inspire confidence in the worth of teacher inservice education.

It is interesting that, while a majority of the literature is critical of inservice as it has been practiced, it also strongly supports it as being important to educational improvement and the professional life of teachers (Joyce, Howey, and Yarger, 1976).

Research on educational interest groups' perceptions of teacher inservice need has centered on teacher perceptions. Cruickshank, Kennedy and Myers (1974) asked teachers to supply data on day-to-day teacher problems. These problems were then rated. Did they occur frequently and were they bothersome?

Factor analysis resulted in seven factors for both frequent and bothersome problems. Data analysis revealed that the factors of "Invigoration -- wanting to vitalize my students' interest in learning and improve their achievement --" and "control -- wanting to get students to behave as I want them to behave --" contained the largest number of significantly bothersome problems. "Invigoration" was also the most frequent category for problems.

A later study by these same researchers (Kennedy, Cruickshank and Myers, 1976) found that beginning teachers, working in the inner city schools, perceived a greater frequency of problems associated

with the factor "control." Evidence for differentiated inservice is therefore presented. The researchers suggest that a "job-fulfilling prophecy" causes inner city teachers to consider certain problems as frequent but not more bothersome than other teachers. They expect these problems and, therefore, live with them.

Ingersol (1976) developed an instrument to provide a reliable and convenient method to assess teacher-felt inservice needs. Teachers were asked how they perceived each area as a personal need. Factor analysis identified seven clusters. "Developing Pupil Self" and "Individualized Instruction" measured a full standard deviation in a favorable direction from the overall mean, and were viewed as in-service needs for teachers.

In summary, both Ingersol (1976) and Cruickshank et al (1974) found teachers perceived a need to help students achieve, to help students become more interested in their own learning, and to provide students with learning experiences suited to their learning needs.

While these studies in inservice education are important, they tend to give a limited view of inservice education, one in which only teachers have a role. Most educators believe educational improvement is the responsibility of all educators, not only teachers (Joyce et al 1976).

INSTRUMENT CONSTRUCTION

Although a single definition cannot be agreed upon at this time, an interesting conceptualization of inservice education, in terms of

various modes of delivery and purposes for teacher involvement, was developed by Joyce, Howey and Yarger (1976), and refined by Yarger and Galluzo(1977). Their five contexts for inservice education are:

1. Job-embedded inservice is programming that occurs within the context of teachers fulfilling their assigned responsibilities. It is directly related to the provision of skills that can be translated into working with students, developing materials, and/or planning curriculum.
2. Job-related inservice is programming that is directly or indirectly related to the provision of skills for the performance of teachers' primary responsibilities of instructing students. It may result in the acquisition of directly applicable skills, or mit may provide content that, while not directly applicable, is clearly related. Job-related inservice training does not occur within the context of the instruction of students.
3. Professionally-related inservice education focuses on those aspects of teachers' roles which are not clearly required, but are non-student and non-instructional. In every sense, however, they are "professional" in their occurrence, and do differentiate teachers from others who work in schools. Such training might focus on parent conferences, community-based education programs, or legally mandated record keeping.
4. Mobility-related inservice is primarily designed to

prepare the teacher to assume a new position and/or obtain a new credential. Although usually thought of as a "upward" mobility, it need not be. The transition from provisionally certified to permanently certified is defined as mobility, as is the transition from teacher to administrator, and the acquisition of skills or credentials necessary to become a specialist.

5. Personally-related inservice is characterized by its emphasis on helping the participant become a more effective person, rather than a more effective professional. Implicit in this type of inservice is that the more effective a person is, the better teacher that person will be. Typically, this type of inservice programming will be self-selected and on occasion even self-directed (p. 7).

The first two contexts for inservice education, job-embedded and job-related, were used as criteria for instrument development. These two contexts are most closely related to the outcome of inservice education selected for this present study, enhancement of those teacher skills and knowledge that lead to effective instruction of students.

The effective instruction of students is a major aspect of this study. Therefore, the instrument "Teacher Inservice Professional Skills Survey" (TIPSS), developed and used to assess the perceptions of each educational interest group (teachers, administrators, and

teacher educators), included only topics dealing with teacher skills and knowledge that lead to effective instruction of students.

To validate TIPSS a conceptual frame work is used. Its premise is that teachers are problem solvers, because they are constantly confronted by situations in which they choose between a number of possible solutions.

What teaching strategy to use, what materials to develop, or which students need instruction on a particular concept, are examples of situations that take varying degrees of analysis before a decision can be made. These teaching decisions can be thought of as a process of reflective thinking.

John Dewey analyzes reflective thinking in How We Think (1933), a discussion of problem solving through inquiry. Dewey believes the first obstacle to solving any problem is deciding the goals and objectives one hopes to achieve. The first problem teachers often face is what to teach, what are the goals and objectives that are relevant to the content being studied? In this study reflection on the overall goals of instruction is called the Planning phase.

After examining the broader purposes of education, a reflective teacher considers the specific conditions under which children learn and individual or group obstacles to learning. Dewey states, "The idea of the solution is thus controlled by the diagnosis that has been made" (p. 110). This phase is referred to as Diagnosis.

Based on this planning and diagnosis, a hypothesis is formed on how to best instruct students or enable students to meet designated instructional goals. This phase of the teaching process is

referred to as Instruction. It focuses on the use of teaching skills, strategies, and materials to meet group or individual student needs. Subsets of Instruction, Classroom Climate and Classroom Control, capture Dewey's belief that individuals should be engaged in a constructive atmosphere, one of sharing and accomplishment.

Dewey's last phase of problem solving is Evaluation. Evaluation should include both data on student outcomes and effective teacher instructional processes.

These phases of teaching are only an outline of the teaching process. There are no set rules as to the order of phases, nor are the divisions between phases as accurate or neat as this discussion makes it seem. In actual practice any of these phases might be repeated or returned to, as the teaching situation requires.

The areas of concern in this study are based on the problem solving model proposed by Dewey. However, the subheadings -- Planning, Diagnosis, Instruction, Classroom Climate, Classroom Control, and Evaluation -- and their definitions are the product of this researcher's efforts. Dewey's model is translated into an instructional framework. It is modified in form, but not in essence.

Specific instrument items were selected from teacher effectiveness research (Rosenshine and Furst, 1971; Rosenshine, 1977; and Medley, 1977), the literature on Competency Based Teacher Education (The Florida Catalog of Competencies, 1973; Houston, 1972; Popham, 1970) and the previously reviewed research on teacher problems and teacher-felt inservice needs.

Instrument reliability was checked by coefficient alpha and ranged from .82 for "Classroom Control" to .97 for "Instruction." Instrument validity was tested by a pilot study of 30 teachers. Respondents were interviewed and asked to develop a definition for each section of the instrument, to decide if all instrument items were appropriately placed within specific headings and to judge the overall value of the instrument items.

SAMPLE

A stratified random sample of public schools within New York State was chosen, and the staff (administrators and teachers) from within these schools were surveyed as to their perceived judgment of the need for teacher inservice education in selected teacher skills and knowledge. This sample was stratified by school grade level (K-6 and 7-12) and New York State Department of Education devised geographic regions. Sample size was determined using a formula based on population variance, proposed by Kish (1965, p. 165). The calculated sample size was approximately 200 teachers, selected from 39 schools.

The sampling plan for public school administrators was directly tied to that for teachers. An administrator from each of the sample school buildings was assessed. This provided a sample size proportionately larger than the calculated figure sufficient for the teacher sample. Thirty-nine additional public school administrators were randomly selected to ensure adequate sample size. This brought the total number of public school administrators surveyed to 78.

The plan for higher educators entailed the sampling of persons directly involved with teacher education at a large number of institutions of higher education within New York State (15%). A large number of institutions were sampled due to a lack of available data on the population.

Respondents were asked to react on a Likert-type scale to a number of statements concerning teacher professional skills. Responses were coded as to need: How great a need is there for in-service education in this skill or knowledge for practicing public school teachers? The instrument's internal consistency checked by coefficient alpha ranged from a low of .86 on the heading of "Planning" to a high of .97 on the heading of "Instruction."

The return rate for teachers was 62%, administrators 67%, and teacher educators 72%. The samples of teachers and administrators were representative of the populations for the demographics of sex, level of education, and teacher position (elementary/secondary). Exact data on the populations of teachers and administrators by professional location (urban, suburban, rural) were not available but the samples seem to be unrepresentative on this characteristic.

Data on the population of teacher educators were not available. Based on the proportionally large number of institutions surveyed and the high return rate, the sample is believed representative.

HYPOTHESES

The following hypotheses are based upon indicators of each educational interest group's perceptions of teacher inservice need.

These indicators are research into teachers' perceptions of teacher inservice need, the teacher education literature, and the role each interest group plays in teacher inservice education.

For the areas of "Planning", "Diagnosis", "Instruction", "Classroom Climate", and "Evaluation":

A. teacher educators will perceive a higher degree of need for teacher inservice education than teachers.

B. teacher educators will perceive a higher degree of need for teacher inservice education than administrators.

C. administrators will perceive a higher degree of need for teacher inservice education than teachers.

For the area of "Classroom Control":

A. administrators will perceive a higher degree of need for teacher inservice education than teacher educators.

B. administrators will perceive a higher degree of need for teacher inservice education than teachers.

C. teachers will perceive a higher degree of need for teacher inservice education than teacher educators.

The descriptive data were analyzed using means, standard deviations, and correlations to gain further insight into the perceptions of each respondent group.

ANALYSIS OF DESCRIPTIVE DATA

Means and standard deviations of teacher, administrator, and teacher educator responses to all instrument headings are presented in table 1.

Table 1

Means and Standard Deviations of Teacher, Administrator and Teacher Educator Perceptions of the Need for Inservice Education in the Areas of "Planning," "Diagnosis," "Instruction," "Classroom Climate," "Classroom Control," and "Evaluation"

		Teacher	Administrator	Teacher Educator
Planning	Mean	3.50	3.97	4.10
	Standard Deviation	0.70	0.49	0.62
Diagnosis	Mean	3.67	3.92	4.09
	Standard Deviation	0.74	0.62	0.70
Instruction	Mean	3.38	3.81	3.93
	Standard Deviation	0.81	0.61	0.63
Classroom Climate	Mean	3.61	3.94	3.90
	Standard Deviation	0.80	0.60	0.69
Classroom Control	Mean	3.72	3.97	3.54
	Standard Deviation	0.97	0.79	0.93
Evaluation	Mean	3.44	4.03	4.00
	Standard Deviation	0.83	0.60	0.68

Examination of this table shows that in the first three areas ("Planning", "Diagnosis", and "Instruction"), the responses follow a similar pattern in relation to the mean. In these cases the lowest mean is recorded under teachers, with the highest under teacher educators.

were moderate to high (.5 to .9) and significant for the areas of "Planning", "Instruction", "Classroom Climate", "Classroom Control", and "Evaluation" (Table 2).

Table 2

Pearson Product Moment Correlations of Means for Respondent Groups on "Planning," "Diagnosis," "Instruction," "Classroom Climate," "Classroom Control," and "Evaluation"

		Teacher and Administrator	Teacher and Teacher Educator	Administrator and Teacher Educator
Planning n - 12	Correlation	.62	.56	.58
	p<	.05	.05	.05
Diagnosis n = 8	Correlation	.44	-.16	.30
	p<	NS	NS	NS
Instruction n = 38	Correlation	.90	.79	.80
	p<	.01	.01	.01
Classroom Climate n = 12	Correlation	.62	.79	.60
	p<	.01	.01	.05
Classroom Control n = 5	Correlation	.90	.88	.96
	p<	.05	.05	.01
Evaluation n = 9	Correlation	.69	.72	.59
	p<	.05	.01	.05

Respondent groups held similar perceptions as to the relative need for an item in relation to other items in its area, but differed in terms of the magnitude of need for each item. Respondent groups differed in the degree to which they perceive teachers need inservice, but not on which teacher skills and knowledge are most or least needed.

For the area of "Diagnosis" correlations were low or negative and non-significant. Respondent groups did not perceive items in similar ways.

RESULTS OF HYPOTHESES TESTING

Multivariate statistical procedures were used to address the research hypotheses, specifically, Multivariate Analysis of Variance (MANOVA).

The hypotheses are based on the differing perceptions of teachers, administrators and teacher educators, as to the need for inservice education. The average response on the set of operationalizing statements for each heading was compared among teachers, administrators and teacher educators according to the hypotheses. These tests were performed at the .05 level of significance.

The mean composite scores identified by MANOVA for the respondent groups -- teacher, administrator and teacher educator -- were different (multi-variate $F = 6.98$, degrees of freedom - 12 and 604, $p < .0001$). The results of multivariate analysis using the six factors as dependent variables had significance at the .0001 level. This overall significance warranted further inspection. Univariate analysis for each of the dependent or criterion variables

"Classroom Climate" and "Evaluation" have a different pattern. For these two areas administrators have the highest mean value, followed by teacher educators and teachers. "Classroom Control" has yet a different pattern. Administrators have the highest mean, followed by teachers, and lastly by teacher educators.

The pattern for standard deviations was one in which administrators had the smallest dispersion of scores, followed by teacher educators and lastly by teachers with the largest standard deviations for all headings. An example is under the heading of "Evaluation"; the administrator standard deviation is 0.604, teacher educator 0.676, and teacher 0.831.

During analysis all three respondent group mean scores for each item were rank ordered. An inspection of this data provided evidence that there were relationships among the perceptions of respondent groups (i.e., item 7 having the lowest mean score for each respondent group) and, therefore, the need for further analyses.

Pearson Product Moment Correlations, calculated to test the strength of relationships among the perceptions of respondent groups, was, therefore, undertaken in an attempt to answer the research hypotheses (see table 3).

Table 3

Univariate Analysis of Variance for the Instrument Headings of "Planning", "Diagnosis", "Instruction", "Classroom Climate", "Classroom Control", and "Evaluation"

Source	Variable	d. f.	Mean Square	Univariate F	p <
Type (Between)		2	7.65		
	Planning			17.98	.0001
Error (Within)		307	.426		
Type (Between)		2	4.82		
	Diagnosis			9.47	.0002
Error (Within)		307	.509		
Type (Between)		2	9.34		
	Instruction			17.13	.0001
Error (Within)		307	.545		
Type (Between)		2	3.53		
	Classroom Climate			6.36	.0020
Error (Within)		307	.555		
Type (Between)		2	2.68		
	Classroom Control			3.07	.0477
Error (Within)		307	.870		
Type (Between)		2	12.09		
	Evaluation			20.75	.0001
Error (Within)		307	.582		

The univariate F for "Planning", "Diagnosis", "Instruction", "Classroom Climate", "Classroom Control", and "Evaluation" were 17.98, 9.47, 17.13, 6.36, 3.07, 20.75 respectively. Each of these univariate F's were significant. Therefore, a difference in perception exists between the respondent group with the lowest mean score and the respondent group with the highest mean score. To fully investigate the hypotheses, one additional question had to be answered. Did the lowest or highest respondent group differ from the respondent group in the middle? To answer this question, a series of post-hoc comparisons were done, using the Newman-Keuls for multiple comparisons.

The results of the Newman-Keuls for the areas of "Planning", "Diagnosis", and "Instruction" showed that there was a difference ($p < .05$) between the perceptions of teachers and administrators, but no difference between the perceptions of administrators and teacher educators. For the areas of "Classroom Climate" and "Evaluation" the Newman-Keuls showed a difference ($p < .05$) between the perceptions of teachers and teacher educators. No difference was found between teacher educators and administrators. For "Classroom Control" there was no difference between either the perceptions of teacher educators and teachers, or teachers and administrators.

The results of hypotheses testing are presented on Tables 4 and 5. Table 4 refers to hypotheses H_1 - H_4 and H_6. Teacher educators perceived a significantly higher degree of need for teacher inservice education than teachers in "Planning", "Diagnosis", "Instruction", "Classroom Climate", and "Evalution". Administrator perceptions of need for teacher inservice education were higher than

teachers' on the same five areas, although significance levels do change. There was no significant difference between the perceptions of teacher educators and administrators on the five areas displayed on Table 4.

Table 4

Results of Hypotheses Testing for Hypotheses H_1 - H_4, H_6

Hypotheses	Variables (Instrument Headings)				
	Planning $p<$	Diagnosis $p<$	Instruction $p<$	Classroom Climate $p<$	Evaluation $p<$
A. Teacher educators will perceive a higher degree of need for teacher inservice education than teachers	.01	.01	.01	.05	.01
B. Teacher educators will perceive a higher degree of need for teacher inservice education than administrators	NS	NS	NS	NS	NS
C. Administrators will perceive a higher degree of need for teacher inservice education than teachers	.01	.05	.01	.01	.01

Table 5 presents the data for hypotheses H_5. This table shows administrators perceived a higher degree of need for teacher inservice education in "Classroom Control", than do teacher educators. There

were no differences between the perceptions of administrators and teachers or teachers and teacher educators.

Table 5

Results of Hypothesis Testing for Hypothesis H_5

Hypotheses	Variable (Instrument Heading) Classroom Control p<
A. Administrators will perceive a higher degree of need for teacher inservice education than teacher educators	.05
B. Administrators will perceive a higher degree of need for teacher inservice education than teachers	NS
C. Teachers will perceive a higher degree of need for teacher inservice education than teacher educators	NS

SUMMARY OF DATA

Respondent perceptions of the need for teacher inservice education were relatively high in terms of the Likert response scale for all six instrument headings. Therefore, all six areas were perceived as needed in teacher inservice education by the three interest groups. The predominant pattern was that respondent groups agreed as to which items were of the most need but differed as to the magnitude of need for each item. These high correlations point to similar perceptions of the most and least needed topics for inservice education. These similar perceptions might be a result of similar or

common past educational experiences, similar perceptions of the skills and knowledge teachers need, and similar perceptions as to the teacher needs that can be met through inservice education. Despite differing roles and characteristics, the three groups share certain priorities (student achievement) and life space (the educational system).

For the area of "Diagnosis", correlations were low or negative and non-significant. Respondent groups did not perceive items in similar ways. This lack of relationship might exist because "Diagnosis" is the least well-defined instructional area, both theoretically and in its practical application in classrooms.

Instrument items dealing with the affective domain were ranked highly in terms of teacher inservice need. Helping students to:

develop responsibility for their own actions,

develop the will to learn on their own, and

accept the feelings of others

are examples.

Items dealing with teacher self-evaluation of the instructional process were also perceived as a high degree of need, especially by administrators and teacher educators.

In summary, respondent groups agreed there was a need for teacher inservice education, differed as to the magnitude of this need, but held similar perceptions as to the most or least needed areas.

IMPLICATIONS FOR PRACTICE

A large portion of the literature is critical of inservice education as it has been practiced (Howey, 1976; Rubin, 1971; Brimm and

Tollett, 1974; Joyce et al, 1976). Part of the problem is that the improvement of inservice has been attempted piecemeal. Attempts are made to improve one aspect of inservice without assessing interrelated factors. An example might be the decision to introduce an inservice program based on a school district priority in reading, without first investigating possible methods of funding, incentives for teacher participation, or methods of instruction. Any approach which deals with only one aspect of inservice is bound to be of limited success.

The interrelated facets of any inservice program must be addressed if that program is to be successful and to reach its potential for helping teachers enhance their instruction. These interrelated facets can be looked at under two broad headings, Governance and Programming. The governance system refers to the process by which decisions are made in any inservice program, and the groups involved in those decisions. Programming refers to the content and methods of delivery for inservice. This study aids in the investigation of these two facets.

PROGRAMMING

Programming for inservice education refers to the content and methods by which inservice is successfully offered.

What should the content of inservice education be? This is not an easy question to answer. Teachers interact with students at varying developmental levels, through various subject areas. Teachers are faced with organizational changes which can lead to inservice need, e.g., mainstreaming, or the introduction of a new reading

program. Each of these provide topics for inservice education.

One area with pertinence for teachers from varying backgrounds and subject areas is teacher effective instruction of students. This generic teacher task has relevance to all teachers. The content of the questionnaire for this study was based on this topic. From the results of this study inservice education in this area is needed. Inservice programming should reflect this perceived need.

Inservice education should, however, include a broad range of content and programs to meet district needs as well as teacher needs. Its content should be a major function of any collaborative arrangement.

The process by which inservice programs are offered is tied very closely to the content of inservice education. Efforts should be made to offer inservice in ways that most efficiently meet the goals and objectives of instruction. For example, courses on learning theory or general teaching methods and strategies may not need to be offered in the instructional settings in which they are to be incorporated. Whereas the evaluation and improvement of a math remediation program within a school building clearly calls for on-site inservice. This allows for inservice during which actual program development and analysis can occur, that is specific to the instructional setting.

In a majority of cases, inservice should involve more than a single presentation on a topic. If inservice is to be meaningful, it must involve continuation and expansion of topics both in terms of teacher development and the scope of its content and goals.

GOVERNANCE

The governance of inservice is changing. As the percentage of teachers who have gained permanent certification has increased, the more traditional inservice structure of higher education and graduate credit has decreased. Teachers have begun to express a need for greater input into inservice decision making. The need for collaborative decision making has been expressed by all educational interest groups (Joyce et al, 1976, p. 3). Presently this process of collaboration is being carried out in a number of situations with no clearcut governance systems becoming dominant. As the complexities of inservice education are investigated and addressed, collaboration will increase, with each group bringing its own perceptions and expertise to the governance process.

Much of the inservice literature has focused on collaboration. The educational interest groups most often mentioned are administrators, teachers, higher educators, citizens, and personnel in state education departments and federal agencies. Often the state and federal government will monitor or mandate collaborative arrangements rather than become actively involved. Examples include required collaboration in the Teacher Corps and Teacher Centers Bills at the federal level and mandated collaboration between school districts, colleges and universities over Competency Based Teacher Education programs in New York at the state level. No clearcut model of collaboration has come to the forefront and it is unlikely that a general model will occur. Instead, various models will be developed, each

with its own governance system, based on the inclusion of those educational interest groups who are both available and given incentives to participate.

Incentives for involvement differ for each interest group. For teachers it can be pay increases, inservice programs related to school problems offered during school hours (job-embedded), or topics of teacher interest and perceived need. For school districts, incentives can range from the ability to address inservice needs caused by district-wide program changes, to having a staff which is actively involved in the enhancement of their instruction. For colleges and universities, incentives can be increased student enrollments and a chance to be actively involved in teacher professional development, to test theory in practice. Teacher educators' involvement can be more comprehensive; teacher needs can be addressed by introducing programs on a district- or schoolwide basis. In this way the characteristic process, of schools resisting change, can be overcome.

Funding is a major concern to the development of all collaborative programming. Funding needs not be looked at in more creative terms. Funding for inservice education is available on a limited basis through state, federal and foundation sources. The greatest practical source of inservice funding, however, is perhaps held by school districts, colleges and universities and state budgets. These funds could become available through shared staffing, the creative use of district professional development and discretionary funds, and higher education student teaching vouchers and tuition. Alloca-

tion of state funds presently going to public-supported institutions for the education of teachers could be kept at present levels but used for collaborative inservice development programs (an example is Florida's inservice education funds which are available for collaborative inservice programming between school districts and colleges and universities).

Educational interest groups need to provide inservice through a variety of collaborative arrangements. Professional development should be the focus of governance. Groups could maintain their autonomy in other areas for which they have responsibility (e.g., school boards for district budgets, higher education for student acceptance into a program of study, teacher organizations for salary

In this study an instructional model was developed from Dewey's (1933) How We Think. His premise is teachers are problem solvers, continually choosing among possible solutions. Each problem takes a measure of reflection by the teacher before it can be solved. Teachers, administrators, and teacher educators perceived a need for teacher inservice education in all six phases of the instructional model. Differences did exist among respondent groups' perceptions of the magnitude of need but perceptions were consistent as to which skills and knowledge are most or least needed.

These results point out the need for teacher inservice education based on systematic models of instruction. Instructional models such as this one give focus to continuous, ongoing programs for

teacher education. Teacher inservice education programs should reflect these perceptions of need.

Much of the hostility that exists among educational constituencies is founded on the assumption that they see the world in different ways; that they have basic philosophical differences in how the world of education should function. From the data in this study it seems that there are no major perceptual differences among constituency groups in terms of inservice education.

Perhaps the hostilities and misunderstandings which exist among educational constituencies are not founded on the perceptions of those in the field. Decisions about inservice are perhaps based more on the practicalities of the educational scene. For example custom, availability and educational trends often have more impact on education decision making than actual perceptions of teacher need. This factor and the continual struggle for influence and power among teachers unions, school boards, and higher education contribute more to hostility rather than any actual substantive perceptual differences.

Similarities in perception pointed to in this study should aid the collaborative process, enabling constituency groups to work toward common goals. These findings should provide a basis for collaboration. However, care must be taken to ensure that the struggle for power and organizational priorities do not cause any perceptual differences to become focal points for disagreement.

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